AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims:

1. (Currently amended) A system for use of internet authentication technology to provide UMTS authentication, the system comprising:

a Serving GPRS Support Node (SGSN) ~~means~~ in a UMTS network; and

a RADIUS server ~~means~~,

the SGSN ~~means~~ and the RADIUS Server ~~means~~ being ~~adapted~~ configured to support signalling ~~therebetween~~ there between, whereby authentication of a User Subscriber Identity Module (USIM) ~~may be~~ is performed [[in]] by the RADIUS Server ~~means~~.

2. (Currently amended) The system of claim 1 wherein the SGSN ~~means~~ is integrated with a Radio Network Controller (RNC) ~~means~~ in an Integrated Network Controller (INC) ~~means~~.

3. (Currently amended) The system of claim 1 ~~or 2~~ wherein the UMTS network comprises a UMTS Terrstrial Radio Access Network (UTRAN).

4. (Currently amended) The system of ~~any preceding claim~~ claim 1 wherein the SGSN ~~means~~ is ~~adapted~~ configured to send an Access-Request RADIUS message to request a UMTS Authentication Vector from the RADIUS server ~~means~~.

5. (Currently amended) The system of ~~any preceding claim~~ claim 4 wherein the RADIUS Server ~~means~~ is configured ~~adapted~~ to generate authentication and keying material so as to authenticate a USIM within a UMTS UE, according to UMTS standards.

6. (Currently amended) The system of claim 5 wherein the RADIUS Server ~~means~~ is ~~adapted~~ configured to implement the MILENAGE algorithm.

7. (Currently amended) The system of claim 5 ~~or 6~~ wherein the RADIUS Server ~~means~~ is configured ~~adapted~~ to generate, using anti-replay-attack dynamic data, a UMTS Authentication Vector, for use by the SGSN ~~means~~.

8. (Currently amended) The system of claim 5 ~~when dependent on claim 4~~ wherein the RADIUS Server ~~means~~ is configured ~~adapted~~ to support dynamic sequence number (SQN).

9. (Currently amended) The system of ~~any preceding claim~~ claim 1 wherein the RADIUS Server ~~means~~ is configured ~~adapted~~ to generate a UMTS Authentication Vector in a RADIUS attribute within an Access-Accept RADIUS message for sending to the SGSN ~~means~~.

10. (Currently amended) The system of ~~any preceding claim~~ claim 1 wherein the SGSN ~~means~~ is configured ~~adapted~~ to receive a UMTS Authentication Vector in a RADIUS Access-Accept message.

11. (Currently amended) The system of ~~any preceding claim~~ claim 4 wherein the SGSN ~~means~~ is configured ~~adapted~~ to send information to re-synchronise anti-replay-attack information within the USIM with the RADIUS Server ~~means~~.

12. (Currently amended) The system of claim 11 ~~when dependent on claim 4~~ wherein the SGSN ~~means~~ is configured ~~adapted~~ to send a UMTS-Resynchronisation-Token attribute in the Access-Request RADIUS message.

13. (Currently amended) The system of claim 12 wherein the RADIUS Server ~~means~~ is configured ~~adapted~~ to reset anti-replay-attack dynamic data in-line with the USIM in response to the data received in the UMTS-Resynchronisation-Token.

14. (Currently amended) The system of claim 13 wherein the RADIUS Server ~~means~~ is configured ~~adapted~~ to implement the MILENAGE algorithm.

15. (Currently amended) A method for use of internet authentication technology to provide UMTS authentication, the method comprising:

providing a Serving GPRS Support Node (SGSN) ~~means~~ in a UMTS network; and

providing a RADIUS server ~~means~~,

signalling between the SGSN ~~means~~ and the RADIUS Server ~~means~~ so that authentication of a User Subscriber Identity Module (USIM) is performed in the RADIUS Server ~~means~~.

16. (Currently amended) The method of claim 15 wherein the SGSN ~~means~~ is integrated with a Radio Network Controller (RNC) ~~means~~ in an Integrated Network Controller (INC) ~~means~~.

17. (Currently amended) The method of claim 15 ~~or 16~~ wherein the UMTS network comprises a UMTS Terrstrial Radio Access Network (UTRAN).

18. (Currently amended) The method of ~~any one of claims 15-17~~ claim 15 wherein the SGSN ~~means~~ sends an Access-Request RADIUS message to request a UMTS Authentication vector from the RADIUS server ~~means~~.

19. (Currently amended) The method of ~~any one of claims 15-18~~ claim 18 wherein the RADIUS Server ~~means generate~~ generates authentication and keying material so as to authenticate a USIM within a UMTS UE, according to UMTS standards.

20. (Currently amended) The method of claim 19 wherein the RADIUS Server ~~means~~ implements the MILENAGE algorithm.

21. (Currently amended) The method of claim 19 ~~or 20~~ wherein the RADIUS Server ~~means~~ generates, using anti-replay-attack dynamic data, a UMTS Authentication Vector and sends ~~the~~ it to the SGSN ~~means~~.

22. (Currently amended) The method of claim 19 ~~when dependent on claim 18~~ wherein the RADIUS Server ~~means~~ supports dynamic sequence number (SQN).

23. (Currently amended) The method of ~~any one of claims 15-22~~ claim 15 wherein the RADIUS Server ~~means~~ generates a UMTS Authentication Vector in a RADIUS attribute within an Access-Accept RADIUS message and sends it to the SGSN ~~means~~.

24. (Currently amended) The method of ~~any one of claims 15-23~~ claim 15 wherein the SGSN ~~means receive~~ receives a UMTS Authentication Vector in a RADIUS Access-Accept message.

25. (Currently amended) The method of ~~any one of claims 15-24~~ claim 18 wherein the SGSN ~~means~~ sends information to re-synchronise antireplay-attack information within the USIM with the RADIUS Server ~~means~~.

26. (Currently amended) The method of claim 25 ~~when dependent on claim 18~~ wherein the SGSN ~~means~~ sends a UMTS-ResynchronisationToken attribute in the Access-Request RADIUS message.

27. (Currently amended) The method of claim 26 wherein the RADIUS Server ~~means~~ resets anti-replay-attack dynamic data in-line with the USIM in response to the data received in the UMTS-Resynchronisation-Token.

28. (Currently amended) The method of claim 27 wherein the RADIUS Server ~~means implement~~ implements the MILENAGE algorithm.

29. (Currently amended) A RADIUS Server ~~adapted~~ configured to perform the method of ~~any one of claims 15-28~~ claim 15.

30. (Currently amended) A SGSN ~~adapted~~ configured to perform the method of ~~any one of claims 15-28~~ claim 15.

31. (Cancelled)

32. (New) A computer-readable storage medium encoded with computer executable instructions for use of internet authentication technology to provide UMTS authentication, the computer-readable storage medium comprising computer executable instructions for:

providing a Serving GPRS Support Node (SGSN) in a UMTS network; and

providing a RADIUS server,

signalling between the SGSN and the RADIUS Server so that authentication of a User Subscriber Identity Module (USIM) is performed in the RADIUS Server.

33. (New) The computer-readable storage medium of claim 32 wherein the SGSN is integrated with a Radio Network Controller (RNC) in an Integrated Network Controller (INC).

34. (New) The computer-readable storage medium of claim 32 wherein the UMTS network comprises a UMTS Terrstrial Radio Access Network (UTRAN).

35. (New) The computer-readable storage medium of claim 32 wherein the SGSN sends an Access-Request RADIUS message to request a UMTS Authentication vector from the RADIUS server.

36. (New) The computer-readable storage medium of claim 35 wherein the RADIUS Server generates authentication and keying material so as to authenticate a USIM within a UMTS UE, according to UMTS standards.

37. (New) The computer-readable storage medium of claim 36 wherein the RADIUS Server implements the MILENAGE algorithm.

38. (New) The computer-readable storage medium of claim 36 wherein the RADIUS Server generates, using anti-replay-attack dynamic data, a UMTS Authentication Vector and sends it to the SGSN.

39. (New) The computer-readable storage medium of claim 36 wherein the RADIUS Server supports dynamic sequence number (SQN).

40. (New) The computer-readable storage medium of claim 32 wherein the RADIUS Server generates a UMTS Authentication Vector in a RADIUS attribute within an Access-Accept RADIUS message and sends it to the SGSN.

41. (New) The computer-readable storage medium of claim 32 wherein the SGSN receives a UMTS Authentication Vector in a RADIUS Access-Accept message.

42. (New) The computer-readable storage medium of claim 35 wherein the SGSN sends information to re-synchronise antireplay-attack information within the USIM with the RADIUS Server ~~means~~.

43. (New) The computer-readable storage medium of claim 42 wherein the SGSN-sends a UMTS-ResynchronisationToken attribute in the Access-Request RADIUS message.

44. (New) The computer-readable storage medium of claim 43 wherein the RADIUS Server resets anti-replay-attack dynamic data in-line with the USIM in response to the data received in the UMTS-Resynchronisation-Token.

45. (New) The computer-readable storage medium of claim 44 wherein the RADIUS Server implements the MILENAGE algorithm.